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[Type of Document] Specification

[Title of the Invention] CAMERA APPARATUS AND METHOD OF  
TAKING PICTURES

[SCOPE OF PATENT CLAIM]

5 [CLAIM 1] A camera apparatus, comprising:

a camera unit which acquires an image;

a line-of-sight detection unit which detects a  
point of eye fixation of a user within a camera screen;

an importance computation unit which

10 determines levels of importance for respective areas of  
the image acquired by said camera unit in accordance  
with the detection by said line-of-sight detection unit;  
and

a number-of-gray-scale-level determining unit

15 which changes a number of gray scale levels for the  
respective areas of the image in response to the  
determination by the importance computation unit.

[CLAIM 2] A camera apparatus, comprising:

a camera unit which acquires an image;

20 a line-of-sight detection unit which detects a  
point of eye fixation of a user within a camera screen;

an importance computation unit which

determines levels of importance for respective areas of  
the image acquired by said camera unit in accordance  
25 with the detection by said line-of-sight detection unit;

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and

a color interpolation processing unit which  
changes color interpolation processing for the  
respective areas of the image in response to the  
5 determination by the importance computation unit.

[CLAIM 3] A camera apparatus, comprising:

a camera unit which acquires an image;

a line-of-sight detection unit which detects a  
point of eye fixation of a user within a camera screen;

10 an importance computation unit which  
determines levels of importance for respective areas of  
the image acquired by said camera unit in accordance  
with the detection by said line-of-sight detection unit;  
and

15 a sharpness enhancement processing unit which  
changes sharpness enhancement processing for the  
respective areas of the image in response to the  
determination by the importance computation unit.

[CLAIM 4] A camera apparatus, comprising:

20 a camera unit which acquires an image;

a line-of-sight detection unit which detects a  
point of eye fixation of a user within a camera screen;

an importance computation unit which  
determines levels of importance for respective areas of  
25 the image acquired by said camera unit in accordance

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with the detection by said line-of-sight detection unit;  
and

a noise removal processing unit which changes  
noise removal processing for the respective areas of the  
5 image in response to the determination by the importance  
computation unit.

[CLAIM 5] The camera apparatus as claimed in claim 1,  
wherein said number-of-gray-scale-level determining unit  
increases the number of gray scale levels in a first  
10 area compared with a second area that has a smaller  
level of importance than the first area.

[CLAIM 6] The camera device as claimed in claim 2,  
wherein said color interpolation processing unit  
performs first processing in a first area, and performs  
15 second processing in a second area that has a smaller  
level of importance than the first area, the first  
processing generating an image having higher quality  
than the second processing, and the second processing  
being faster than the first processing.

[CLAIM 7] The camera device as claimed in claim 3,  
wherein the sharpness processing unit performs first  
processing in a first area, and performs second  
processing in a second area that has a smaller level of  
importance than the first area, the first processing  
25 generating an image having higher quality than the

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second processing, and the second processing being faster than the first processing.

[CLAIM 8] The camera device as claimed in claim 4, wherein said noise removal processing unit performs

5 first processing in a first area, and performs second processing in a second area that has a smaller level of importance than the first area, the first processing generating an image having higher quality than the second processing, and the second processing being  
10 faster than the first processing.

[CLAIM 9] A camera apparatus, comprising:

a camera unit which acquires an image;

a line-of-sight detection unit which detects a point of eye fixation of a user within a camera screen;

15 an importance computation unit which determines levels of importance for respective areas of the image acquired by said camera unit in accordance with the detection by said line-of-sight detection unit; and

20 an image processing unit which performs at least one of processing of changing a number of gray scale levels for the respective areas of the image, processing of changing color interpolation processing for the respective areas of the image, processing of  
25 changing sharpness enhancement processing for the

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respective areas of the image, and processing of changing noise removal processing for the respective areas of the image in response to the determination by the importance computation unit.

- 5 [CLAIM 10] A method of acquiring an image, comprising  
the steps of:
- acquiring an image;
  - detecting a point of eye fixation of a user  
within a camera screen;
  - 10 determining levels of importance for  
respective areas of the acquired image in accordance  
with the detection of the point of eye fixation; and
  - changing a number of gray scale levels for the  
respective areas of the image in response to the  
15 determined levels of importance.
- [CLAIM 11] A method of acquiring an image, comprising  
the steps of:
- acquiring an image;
  - detecting a point of eye fixation of a user  
20 within a camera screen;
  - determining levels of importance for  
respective areas of the acquired image in accordance  
with the detection of the point of eye fixation; and
  - changing color interpolation processing for  
25 the respective areas of the image in response to the

determined levels of importance.

[CLAIM 12] A method of acquiring an image, comprising the steps of:

- acquiring an image;
- 5 detecting a point of eye fixation of a user within a camera screen;
- determining levels of importance for respective areas of the acquired image in accordance with the detection of the point of eye fixation; and
- 10 changing sharpness enhancement processing for the respective areas of the image in response to the determined levels of importance.

[CLAIM 13] A method of acquiring an image, comprising the steps of:

- 15 acquiring an image;
- detecting a point of eye fixation of a user within a camera screen;
- determining levels of importance for respective areas of the acquired image in accordance
- 20 with the detection of the point of eye fixation; and
- changing noise removal processing for the respective areas of the image in response to the determined levels of importance.

[Detailed Description of the Invention]

25 [Field of the Invention]

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